

Amendments to the Specification:

Please amend paragraphs [0041], [0063], and [0083] as shown below.

[0041] FIG. 1 A and B ~~is are~~ a schematic diagrams of a cross sections of a preferred devices for detecting the presence of a compound in a sample.

[0063] FIG. 1 A is a schematic diagram showing the layer structure of a preferred device 10 for detecting the presence of a compound in a sample. The device 10 includes a substrate that includes a support 20 such as a glass slide and a metallized top surface 40 such as gold overlying a layer of an adhesion promoting material 30 such as titanium applied on top of support 20. A self-assembled monolayer 50 comprises an alkanethiol with a functional group that interacts with a moiety of a liquid crystal in a liquid crystal film 60 applied over self-assembled monolayer 50.

[0083] An optical cell for use in detecting the presence of a compound in a sample preferably includes a device for detecting the presence of a compound in a sample as described above. As shown in FIG. 1B, ~~A~~an optical cell may also include a spacing material, preferably a film 70, positioned parallel to but a spaced distance away from the top surface of the surface with the functional groups that interact with the compound. The spacing material and the top surface of the surface with a functional group for detecting the compound define a cavity that may be filled with a liquid crystal. Optical cells also preferably include a second surface 80 that uniformly aligns the liquid crystal when it contacts the surface. Such a second surface is preferably free of any functional group that interacts with the compound. The second surface of the optical cell contacts a first surface of the liquid crystal which is opposite a second surface of the liquid crystal that contacts the self-assembled monolayer of a preferred device for detecting the presence of a compound in a sample as described above. Typically, the spacing material, such as a film, is positioned between the detection surface and the surface that uniformly anchors liquid crystals. It is not required or necessarily preferred that both surfaces of the optical cell include functional groups that interact with the compound to be detected in a sample. For

example, in some preferred optical cells, a second surface without functional groups is employed. An example of such a second surface is a SAM formed from an alkanethiol that does not have a functional group that interacts with the compound to be detected. The spacing material is preferably a film of a defined thickness that is preferably stable in the presence of the liquid crystal material, easy to handle, and does not contaminate the liquid crystal.